Claims

What is Claimed is:

1.   (Currently amended) A pulse-width modulated digital amplifier comprising:

a loop filter for producing a stable loop output signal Ew from an input digital signal Ei,

the loop filter including an nth order integrator, n having an integer value greater than one,

the nth order integrator comprising a first integrator and m additional integrators, m having

an integer value,

the first integrator having an absolute magnitude of gain that is greater than the sum of the

absolute magnitudes of gains of the m additional integrators; and

a comparator for receiving loop output signal Ew and a pre-selected signal, the comparator

generating a pulse-width modulated signal Ep from the pre-selected signal and signal Ew,

the pre-selected signal comprising a sawtooth wave generated signal;

a switching output stage for receiving pulse-modulated signal Ep and generating an output signal Eo;

and

a feedback loop for channeling a portion of the signal Eo to the loop filter input and combining with

the input signal Ei.

Original Claim Set Listing:

1.   (Original) A pulse-width modulated digital amplifier comprising:

a loop filter for producing a stable loop output signal Ew from an input digital signal Ei,

the loop filter including an nth order integrator, n having a value greater than one,

the nth order integrator comprising a first integrator and m additional integrators,

the first integrator having an absolute magnitude of gain that is greater than the sum of the

absolute magnitudes of gains of the m additional integrators; and

a comparator for receiving loop output signal Ew and a pre-selected signal, the comparator

generating a pulse-width modulated signal Ep from the pre-selected signal and signal Ew,

the pre-selected signal comprising a sawtooth wave generated signal;

a switching output stage for receiving pulse-modulated signal Ep and generating an output signal Eo;

and

a feedback loop for channeling a portion of the signal Eo to the loop filter input and combining with

the input signal Ei.